

### **3.14 Visual Quality**



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## 3.14 Visual Quality

### 3.14.1 Studies and Coordination

This section is based on the *SR 509/South Access Road EIS Discipline Report: Visual Quality* (CH2M HILL June 2000) and *SR 509/South Access Road EIS: I-5 Improvements Report* (CH2M HILL October 2001). This analysis follows the procedure outlined in *Visual Impact Assessment for Highway Projects* by the FHWA (FHWA 1981).

In brief, visual resource management (VRM) is a systematic approach for assessing visual resources in a project area and using the findings to assess project impacts. While VRM terminology is not uniform, there is general agreement on the broad elements of the major approaches. These approaches consider visual experience to be the product of both visual resources and viewer response. A project such as a highway causes visual resource change that can be measured objectively. Viewer response to this change, although subjective, usually displays broad patterns of consensus. Thus, visual impacts include both landscape change and viewer response to that change.

The visual environment was assessed through field studies, and the principal features were identified. Photographs were taken of views that might be affected by the proposed project. In addition, meetings and personal interviews were held with representatives of the following agencies: City of SeaTac, Department of Planning and Community Development and Public Works Department; City of Des Moines, Public Works Department and Community Development Department; Port of Seattle, Aviation Planning Department; and WSDOT's Northwest Region.

The starting point for visual assessment is to determine the limits of the visual environment (in other words, the project area), which includes considering the regional landscape, the geographical area from which the proposed project may be visible (its viewshed), as well as the specific views that the proposed project is likely to change or create.

### 3.14.2 Affected Environment

#### *Regional Visual Characteristics*

The terrain of the project area is a rolling plateau that extends north to south and is bordered by parallel valleys carved by glacial action and occupied by Puget Sound and the Green River. The plateau generally rises 100 to 300 feet above the valley floors and the surface of Puget Sound. Most valley walls are moderately steep.

Land use patterns and associated structures relate to the underlying terrain. The flat crest of the plateau is occupied by Sea-Tac Airport. The associated airport terminal and support buildings range from one to four stories in height and are moderate to large in scale. Aviation-related office, hotel, warehouse/distribution, and industrial uses cluster on the relatively flat ground immediately east and south of the airport and range from one to eight stories in height. The rolling terrain along Des Moines Creek and the gentler valley walls, such as along I-5, are occupied by single-family and multifamily residential uses. The buildings associated with these uses range from one to three stories in height, and their scale ranges from small to moderate. Many of the steeper valley walls support dense greenbelts of primarily deciduous native trees.

Within this regional landscape, scenic views are available from hilltops, plateau edges, valley walls, and shorelines to distant and midground features that include the Cascade Mountains, Mount Rainier, the Olympic Mountains, and Puget Sound and its islands. Local features associated with high-quality foreground views include rock exposures, steep slopes and bluffs, rivers and streams, stands of mature coniferous and deciduous trees, and parks.

### ***Project Visibility***

The visual environment that would be affected by a project is limited to the area from which the proposed project would be visible; this area is termed the project viewshed. The project viewshed is also the area that could be seen from the proposed project itself.

### ***Visual Resources***

The visual resources in the project area include the following:

- Creeks, sloped areas, wooded areas, and the Tyee Valley Golf Course
- Locations with scenic views to distant features that include Puget Sound, the Olympic Mountains, the Cascade Mountains, and Mount Rainier

### ***Viewers***

Identifying the viewers who would see a project and the aspects of the visual environment to which they are most likely to respond is the key to understanding and predicting viewer response to a project's effects on visual resources.

Within the project area, the following are the principal groups likely to view the proposed project and exhibit high viewer sensitivity:

- Persons engaged in recreation at existing sites, including the Tyee Valley Golf Course, Des Moines Creek Park, Angle Lake Park, Barnes Creek

Nature Trail, Des Moines Sports Park, Linda Heights Park, and Midway Park

- Residents of predominantly single-family areas, including the existing Manhattan Hill (8th Avenue South/Des Moines Memorial Drive), Maywood (also known as City Center), North Hill, North Central, Grandview, Midway, and East Federal Way
- Residents of neighborhoods combining multifamily and single-family areas, including the existing Mansion Hill, Pacific Ridge, and South Des Moines, as well as an area in Federal Way west of I-5 (The difference from predominantly single-family areas is in viewing conditions: one-story vs. two- to four-story structures and the degree of view obstruction by trees and structures.)
- Parents, teachers, and children at existing schools and associated playfields (generally located in residential areas and functioning as community parks when schools are out of session)

Viewer groups likely to exhibit moderate- or low-viewer sensitivity are located in other portions of the project area, listed in order of decreasing sensitivity:

- Travelers along the existing arterial streets, highways, and freeways that traverse the project area
- Employees and visitors in existing office and hotel centers along International Boulevard South, particularly in the SeaTac “International Gateway” area along International Boulevard South between South 176th and South 188th streets, and the SeaTac Angle Lake area along 28th Avenue South between South 192nd and South 200th streets
- Employees and visitors in existing commercial, distribution, transportation, and industrial business areas along International Boulevard South, South 188th Street, 12th Place South, and Des Moines Memorial Drive South between 12th Place South and South 194th Street
- Currently vacant areas, planned for future development as airport-related business centers, including the SeaTac Aviation Business Center
- The Port of Seattle is in the process of implementing the Noise Remedy Program for Sea-Tac Airport. As a result, areas along the east, west, and south sides of Des Moines Creek Park are currently vacant, although planning for their redevelopment for more compatible uses is underway. Much of the area west of 28th Avenue South between South 188th and South 200th streets is also in low-intensity transitional use because the Port of Seattle has acquired it for the SASA.

## ***Key Views of the Proposed Project***

Key views have been selected to represent the range of views of the build alternatives within the project area, evaluate the existing visual quality of those views, and assess the visual impacts of these alternatives on the key views. The views generally represent locations at which major viewer groups could be expected to look toward the proposed project and would be likely to see its principal visual effects. The key view locations are listed in Table 3.14-1 and mapped in Figure 3.14-1. (Key view photographs are provided in the Visual Quality Discipline Report (CH2M HILL June 2000) and the *SR 509/South Access Road EIS: I-5 Improvements Report* (CH2M HILL October 2001).

## ***Visual Quality***

Evaluating the existing visual quality within the project area provides an indicator of the relative value of visual resources and the importance of potential changes to these resources. Three criteria are used to evaluate the quality of a visual resource: vividness, intactness, and unity. Vividness is the memorability of landscape components as they combine in striking and distinctive visual patterns. Intactness is the visual integrity of the natural and human landscape and its freedom from encroaching elements. Unity is the visual coherence and compositional harmony of the landscape considered as a whole (FHWA 1981). The usefulness of these evaluative criteria are that they can help to identify mitigation measures and assess their relative effectiveness.

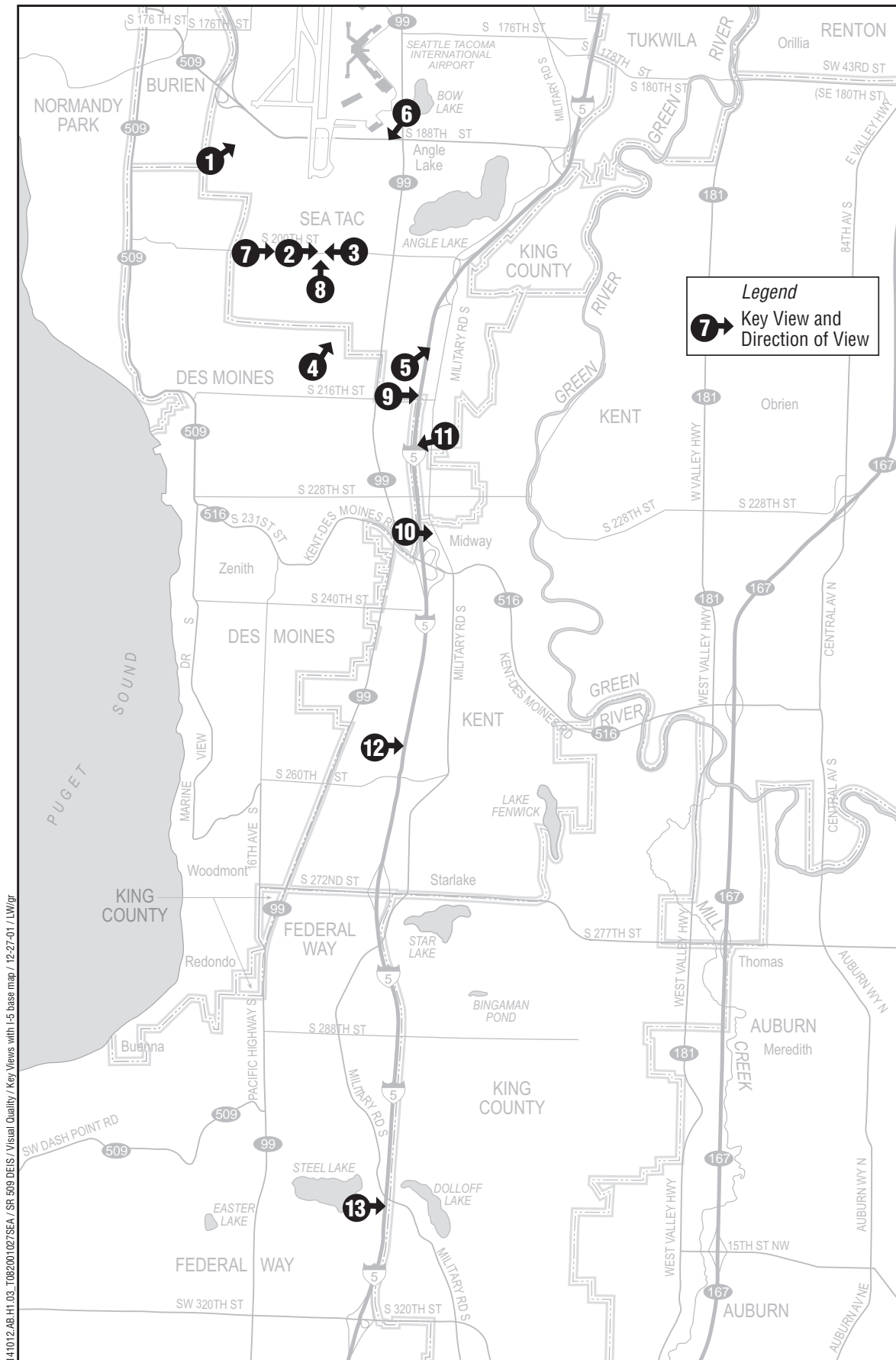
The visual quality rating for each key view is based on the evaluative criteria of vividness, intactness, and unity. The Visual Quality Discipline Report and the I-5 Improvements Report (CH2M HILL June 2000 and October 2001) document in detail those ratings.

## ***Landscape Units***

To facilitate the description and analysis of the visual environment likely to be affected by the proposed project alternatives, the foreground landscapes along the route alternatives have been grouped into landscape units having similar visual resource characteristics. These landscape units are described in Table 3.14-2 below and are shown in Figure 3.14-2.

Figure 3.14-2 also characterizes the landscape units in terms of the RCP adopted by WSDOT (WSDOT 1996). The following are the three classifications that appear to coincide with the types of visual character that presently exist within the project area:

<b>Table 3.14-1</b> <b>Key Views of the Proposed Project</b>			
<b>Key View</b>	<b>Location</b>	<b>Direction</b>	<b>Distance</b>
1	South 192nd Street at Prince of Peace Church parking lot	Northeast	Foreground, Middle ground, Background
2	South 200th Street at Hillgrove Cemetery	East	Foreground, Middle ground
3	South 200th Street and 26th Avenue South	West	Foreground, Middle ground
4	Des Moines Creek Trail	Northeast	Foreground
5	South 211th Street and 32nd Avenue South	Northeast	Foreground, Middle ground
6	South 182nd Street and International Boulevard South	Southwest	Foreground
7	South 200th Street and 14th Avenue South	East	Foreground, Middle ground
8	South 200th Street at Des Moines Creek Trailhead	North	Foreground, Middle ground
9	South 212th Street and 31st Avenue South	East	Foreground, Middle ground
10	Kent-Des Moines Road to South 216th Street	East	Foreground, Middle ground, Background
11	South 216th Street to South 228th Street	West	
12	South 260th Street to South 252nd Street	East	Foreground
13	South 310th Street to South 298th Street	East	Foreground, Middle ground



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0 1900 3800  
 Scale in Feet



FIGURE 3.14-1

## Key Views of the Proposed Project



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 Environmental Impact Statement



<b>Table 3.14-2 Landscape Units</b>			
<b>Landscape Unit No.</b>	<b>Name and Key View</b>	<b>Visual Resources</b>	<b>Viewers</b>
1	Manhattan Hill; Key View 1	East-facing hillside with intermittent views to Cascade Mountains; mature coniferous trees; established single-family residential neighborhood and airport-related industrial development on lower slopes; Des Moines Memorial Drive South (tree-lined historic route); existing visual quality is moderate	Low numbers of residential viewers with high viewer sensitivity, but exposure to east limited by dense tree cover
2	Maywood; Key View 7	Saddle along Des Moines Memorial Drive South, with internal views; mature coniferous trees; established single-family residential neighborhood and eastern portion acquired by Sea-Tac Airport Noise Remedy Program; existing visual quality is moderate	Moderate numbers of residential viewers with high viewer sensitivity, but exposure to mid-ground and distant views obstructed by terrain and dense tree cover
5	Upper Des Moines Creek; Key Views 2 and 8	Moderately broad stream valley with internal views; wooded slopes, bottomland meadows, and riparian trees; Tyee Valley Golf Course and Des Moines Creek Park and Trail; existing visual quality is moderately high to high	Moderate numbers of recreational users with high viewer sensitivity and high viewer exposure to foreground and midground views (trail development in the City of Des Moines with connection to Puget Sound will increase user numbers; City of SeaTac also proposes future extension of Trail to north, across South 200th Street and west of Sea-Tac Airport)
6	Lower Des Moines Creek; Key View 4	Narrow stream valley with internal views of steep wooded slopes and stream; Des Moines Creek Park and Trail; existing visual quality is high	Moderate numbers of recreational users with high viewer sensitivity and high viewer exposure to foreground and midground views (trail development in the City of Des Moines will increase numbers)
8	SeaTac Center; Key View 6	Gentle east-facing slope of Bow Lake basin with internal views; street trees and ornamental plantings along International Boulevard South (SR 99); massive airport terminal on west side of boulevard faced by large, multistory hotel and office structures, which are replacing remaining small commercial buildings; existing visual quality is moderate	High numbers of visitors and employees with moderate viewer sensitivity and high viewer exposure to foreground views
9	West Angle Lake; Key View 3	Gentle ridgetop with views east to Angle Lake basin and west to Des Moines Creek valley; street trees and ornamental plantings along International Boulevard South; remnant residential plantings within area acquired for the future SASA	Moderate numbers of visitors and employees with moderate viewer sensitivity and viewer exposure limited to foreground views except along edge of plateau; moderate numbers of residential viewers with high viewer sensitivity in

<b>Table 3.14-2 Landscape Units</b>			
<b>Landscape Unit No.</b>	<b>Name and Key View</b>	<b>Visual Resources</b>	<b>Viewers</b>
		along west side of 28th Avenue South; large, multistory hotel and office structures (including the Federal Detention Center just to the left of the key view) are replacing remaining small commercial buildings along SR 99; one- to three-story multifamily residential buildings along I-5 buffered by strip of mature coniferous trees; existing visual quality ranges from moderate (most views) to moderately high (views from edge of plateau)	multifamily portion of unit, but exposure is limited to foreground views
10	South 208th Street Draw; Key View 5	Saddle that interrupts ridgetop and drains west to Des Moines Creek with internal views; mature coniferous and deciduous trees in undeveloped portion of unit east of SR 99 and along I-5; office and hotel structures appear to be replacing remaining small commercial and industrial buildings along SR 99; large mobile home community west of SR 99; existing visual quality is moderate (most views) to moderately low (views along older commercial sections of SR 99)	Moderate numbers of visitors and employees with moderate viewer sensitivity and viewer exposure limited to foreground views except along filled portion of SR 99 at center of draw; moderate numbers of residential viewers with high viewer sensitivity in mobile-home portion of unit, but exposure is limited to foreground views
11	Mansion Hill; Key Views 5 and 9	Gentle ridgetop with views on west slope over SR 99 to Olympic Mountains; mature trees in established single-family neighborhood between SR 99 and I-5 buffered by strip of mature coniferous trees; existing visual quality ranges from moderate (most views) to moderately high (distant views from western slope)	Moderate numbers of residential viewers with high viewer sensitivity in single-family portion of unit, but exposure is generally limited to foreground views
12	Midway Ridge; Key Views 5, 10, and 11	Gentle ridgetop with views on west slope over SR 99 to Olympic Mountains; commercial uses along SR 99; mixed multifamily and single-family neighborhood between SR 99 and I-5, buffered by mature trees from both roadways; existing visual quality ranges from moderate (most views) to moderately high (distant views from multifamily buildings on western slope)	Moderate numbers of residential viewers with high viewer sensitivity in mixed multifamily and single-family housing, but exposure to existing roadways is generally limited to foreground views
13	Des Moines Creek Terrace; no key view	Relatively level terrace along 24th Avenue South, above Des Moines Creek Park with internal views; western portion acquired by airport noise remedy program, fenced and currently vacant, with dense stands of deciduous trees; eastern portion contains mixed residential	Low numbers of residential viewers with high viewer sensitivity in residential portion of unit, but exposure is generally limited to foreground views by dense tree cover and closure of much of the area to the public

<b>Table 3.14-2 Landscape Units</b>			
<b>Landscape Unit No.</b>	<b>Name and Key View</b>	<b>Visual Resources</b>	<b>Viewers</b>
		neighborhood; existing visual quality is moderate	
14	Midway Terrace; no key view	Relatively level terrace along 24th Avenue South, above Barnes Creek, with internal views; mature coniferous and deciduous trees; established single-and multifamily residential neighborhood with schools and playfields; existing visual quality is moderate	Moderate numbers of residential viewers with high viewer sensitivity, but exposure is generally limited to foreground views by terrain and tree cover
15	I-5 East Key Views 12 and 13	Rolling topography with few ridgetop views; mature coniferous and deciduous trees; established single-and multifamily residential neighborhoods with schools and playfields; existing visual quality is moderate	Moderate numbers of residential viewers with high viewer sensitivity, but exposure is generally limited to foreground views by terrain and tree cover

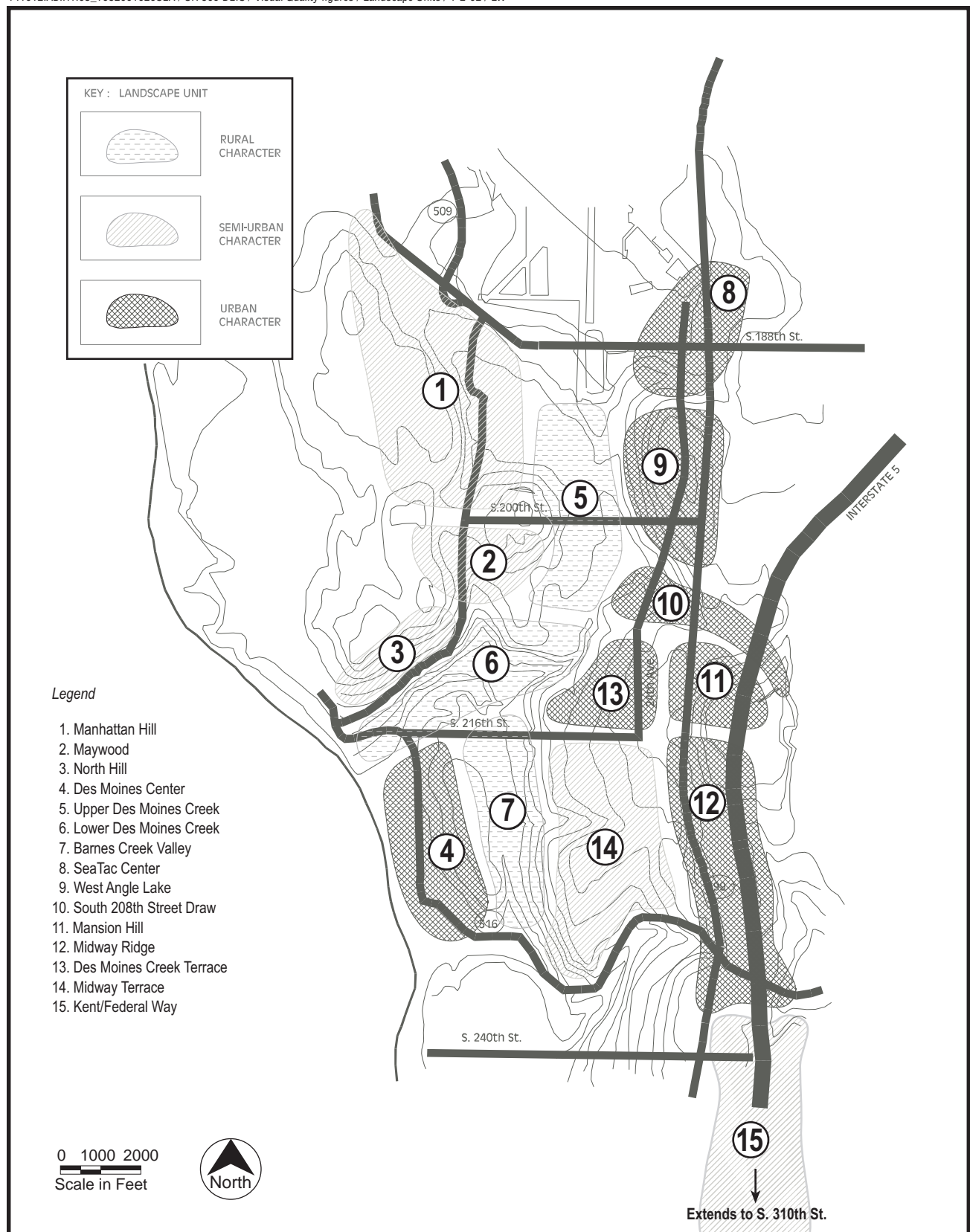


FIGURE 3.14-2  
**Landscape Units**



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Environmental Impact Statement

- Rural, characterized by natural-appearing landforms and vegetation that is predominantly native
- Semiurban landscapes that are transitional in character, with vegetation comprising a combination of native and nonnative species
- Urban, characterized by the predominance of buildings and other development and vegetation that is predominantly nonnative (ornamental) tree, shrubs, and ground cover, with remnants of native vegetation

Much of the project area appears rural and semiurban from the ground because of the amount of tree cover, although the amount of existing development revealed in aerial views could be considered urban.

### **3.14.3 Environmental Impacts**

#### ***Project Features***

The visibility and appearance of the proposed project build alternatives would be determined by the location and size of project facilities in relation to the adjoining topography, vegetation, and existing human development. Broadly speaking, the build alternatives have eight major visual components: (1) the cleared right-of-way in which the roadway and associated facilities are located, (2) the vertical roadway profile (elevated, surface, or depressed) in relation to existing topography, (3) grading, including cuts, fills, and surface drainage systems and basins, (4) bridges and major architectural elements such as retaining walls, (5) the extent of paved surface (travel lanes and shoulders), (6) roadside appurtenances such as noise walls, impact barriers and attenuators, and directional signs, (7) roadway lighting including standards (poles) and luminaires (light fixtures), and (8) roadside planting.

At the time of writing, preliminary engineering studies were underway, and a number of project design features had not yet been resolved. To complete the preliminary visual impact assessment, the preparers have made the following assumptions about project design:

- Right-of-way acquisition would sufficiently accommodate the grading of cuts and fills to finished slopes averaging 4:1 horizontal to vertical proportions, except where preliminary right-of-way limits indicate otherwise; retaining walls are assumed in these locations, with remaining slopes at 4:1.
- The typical project bridge design would be prefabricated girders supported on concrete bents and piers; retaining structures would be vertical concrete walls.

- The extent of paved surface would be limited to travel lanes and shoulders, with the widths described in the Description of Project Alternatives section of this Revised DEIS (Chapter 2); improvements to South 200th Street, as a result of the project; and the bike path, under Alternative C2 and possibly Alternative C3, would be paved.
- Impact barriers would be provided along the outer edges of all elevated structures, and barriers or guard rails would be provided in areas of high, steep fills.
- Noise walls would be provided along portions of the alignment as determined by WSDOT.
- Roadway lighting would be provided only at proposed project intersections and interchanges.
- Roadside planting would be limited to seeding necessary for slope stabilization and erosion control, without permanent irrigation systems.

### ***Alternative A (No Action)***

The visual resources of the project area would not change under the No Action Alternative; therefore, there would be no impacts to the visual environment.

### ***Impacts Common to All Build Alternatives***

Existing visual resources could be affected at several levels. First, they might add, alter, or remove some of the visible features that compose the basic visual resources of the landscape. Second, the build alternatives may change the visual character of existing resources and the quality of the views these resources compose. Visual impacts associated with operation of the SR 509/South Access Road Project could also include views of moving traffic and headlight glare.

### ***Alternative B***

#### **Visual Resource and Quality Change**

Table 3.14-3 summarizes the visual resource change that would be caused by the proposed project in the key views from which Alternative B would be visible. The table also indicates whether the change in quality would be low, moderate, or high. Of the eleven views affected by Alternative B, two views would experience a low level of change, five a moderate level, and four a high level. The four key views with a high level of change are Key View 4

Table 3.14-3 Visual Resource and Level of Quality Change, Alternative B						
Key View/Level of Quality Change	Modification of Landform	Removal of Vegetation	Introduction of Manmade Structures	View Obstruction	Light and Glare	Shading
<b>1/Low</b> (South 192nd Street at Prince of Peace Church parking lot)	SR 509: roadway berm (fill) and transition to cut between existing warehouses and office complex under construction on right (south) edge of immediate foreground  South Access Road: most grading not visible (in valley behind and below main runway)	SR 509: removal of trees along Des Moines Way South, beyond office complex under construction on left (north) edge of immediate foreground  South Access Road: removal of midground trees on hillside and skyline to east of Des Moines Creek valley (behind main runway)	SR 509: overpass bridge at 12th Place S; luminaires for intersection lighting; directional signs	SR 509: no scenic elements obstructed (project features all below midground skyline)  South Access Road: same	SR 509: unlikely (top of luminaires below eye level)  South Access Road: same	No shading of scenic resources or sensitive viewing areas is likely
<b>2/Moderate</b> (South 200th Street near 18th Avenue South)	South Access Road: midground cut on east side of Des Moines Creek valley  South 200th Street: widen to 3 to 5 lanes (varies)	South Access Road: removal of midground trees on hillside and skyline on left side of South 200th Street  South 200th Street: removal of foreground trees in valley for roadway widening	South Access Road: retaining walls likely below the SASA and Federal Detention Center  South 200th Street: midground overpass, South Access Road ramps, widen to three to five lanes (varies), and luminaires	South Access Road: no scenic elements obstructed (project features all below midground skyline)  South 200th Street: same	South Access Road: possible glare from luminaires at intersection with South 200th Street	No shading of scenic resources or sensitive viewing areas is likely
<b>3/Moderate</b> (South 200th Street & 26th Avenue South)	SR 509: screened by trees on intermediate ridge  South Access Road:	SR 509: screened by trees on intermediate ridge  South Access Road:	SR 509: screened by trees on intermediate ridge  South Access Road:	SR 509: no scenic elements obstructed  South Access Road: no scenic elements	SR 509: screened by trees on intermediate ridge  South Access Road:	No shading of scenic resources or sensitive viewing areas is likely

Table 3.14-3 Visual Resource and Level of Quality Change, Alternative B						
Key View/Level of Quality Change	Modification of Landform	Removal of Vegetation	Introduction of Manmade Structures	View Obstruction	Light and Glare	Shading
	foreground cut on east side of Des Moines Creek valley South 200th Street: widen to three to five lanes (varies)	removal of foreground trees on both sides of downhill section of South 200th Street South 200th Street: remove trees in valley for roadway widening	removal of buildings in left foreground, retaining walls likely below the SASA and Federal Detention Center South 200th Street: overpass, northbound ramps to South Access Road, widening to five lanes, and luminaires	obstructed (project features all below South 200th Street)	possible glare from luminaires at intersection with South 200th Street	
<b>4/High</b> (Des Moines Creek Trail)	SR 509: some grading or other disturbance of foreground valley walls for bridge abutments, piers and drainage South Access Road: not visible in this view	Possible removal of foreground trees during bridge construction; possible preclusion of regrowth due to rainfall interception	Two bridge structures for SR 509 and access ramps to 24th Avenue South	Partial obstruction of view of valley walls		Increased shading of trail and creek valley, rainfall interception
<b>5/High</b> (South 211th Street and 32nd Avenue South)	SR 509: cut for ramps to I-5	Removal of mature foreground trees (residential plantings and I-5 roadside buffer)	Possible removal of foreground house and other neighboring homes and multifamily residences; exposure of I-5, SR 509 ramps, and HOV flyover ramp; or noise walls	Exposure to unattractive views of I-5	Possible headlight glare from I-5 and SR 509 traffic No roadway lighting likely	No shading of scenic resources or sensitive viewing areas is likely



Table 3.14-3 Visual Resource and Level of Quality Change, Alternative B						
Key View/Level of Quality Change	Modification of Landform	Removal of Vegetation	Introduction of Manmade Structures	View Obstruction	Light and Glare	Shading
<b>6/Low</b> (18200 International Boulevard South)	South Access Road: highway berm steepened and closer to International Boulevard South	Possible removal of existing mature roadside trees	Possible introduction of retaining walls and overpass to North Access Road Future Light Rail Transit alignment may be added to view	No obstruction of scenic resources likely Future Light Rail Transit alignment may obstruct view of South Access Road	Incremental impact (if any roadway lighting added) due to existing lighting along International Boulevard South	No shading of scenic resources or sensitive viewing areas is likely
<b>7/Moderate</b> (South 200th Street and 14th Avenue South)	SR 509: landform modification not visible (beyond crest of South 200th Street) South 200th Street: widen to at least four lanes beyond foreground intersection	SR 509: removal of existing trees visible beyond crest of South 200th Street South 200th Street: removal of trees on left for roadway widening	No highway structures visible	No obstruction of scenic resources likely	SR 509: no additional lighting	No shading of scenic resources or sensitive viewing areas is likely
<b>10/High</b> (Kent-Des Moines Road to South 216th Street)	Cut for interchange off-ramps, collector/distributor lanes, and underpass	Removal of mature vegetation	Construction of additional lanes and underpass, and possible installation of a noise barrier*	No obstruction of scenic resources likely	Light and glare impacts unlikely (top of luminaires below eye level)	No shading of scenic resources or sensitive viewing areas is likely
<b>11/High</b> (South 216th Street to South 228th Street)	Cut for ramps to I-5 and collector/distributor lanes	Removal of mature vegetation	Construction of additional lanes; removal of foreground residences; exposure of I-5; and possible installation of noise barrier*	No obstruction of scenic resources likely	Minor light and glare impacts possible	No shading of scenic resources or sensitive viewing areas is likely

Table 3.14-3 Visual Resource and Level of Quality Change, Alternative B							
Key View/Level of Quality Change	Modification of Landform	Removal of Vegetation	Introduction of Manmade Structures	View Obstruction	Light and Glare	Shading	
<b>12/Moderate</b> (South 260th Street to South 252nd Street)	No modification to landforms identified	Removal of mature vegetation	Construction of additional lanes and possible installation of noise barrier*	No obstruction of scenic resources likely	Minor light and glare impacts possible	No shading of scenic resources or sensitive viewing areas is likely	
<b>13/Moderate</b> (South 310th Street to South 298th Street)	No modification to landforms identified	Removal of some mature vegetation	Construction of additional lane and possible installation of noise barrier*	No obstruction of scenic resources likely	Minor light and glare impacts possible	No shading of scenic resources or sensitive viewing areas is likely	
* Noise barrier proposed as mitigation (see Section 3.2, Noise)							

(Des Moines Creek Trail), Key View 5 (South 211th Street and 32nd Avenue South), Key View 10 (Kent-Des Moines Road to South 216th Street), and Key View 11 (South 216th Street to South 228th Street).

### **Viewer Response**

Table 3.14-4 indicates the likely degree of viewer response to adverse visual impacts on a scale ranging from high to low, based on viewer sensitivity and exposure. High-sensitivity viewer groups are considered likely to have a high response to visual alteration, whether their exposure is high or moderate. Viewer response would be high at Key Views 1, 4, 5, 10, and 11.

### **Visual Impacts (View of the Road)**

The visual impacts of a project result from two phenomena: physical changes to the visual environment and viewer response to those changes. To determine the visual impact of a key view, the level of visual quality change and viewer response ratings were averaged. The results of this averaging are shown in Table 3.14-5. Alternative B would have high level of impact on Key Views 4, 5, 10, and 11.

In addition, Table 3.14-5 ranks the alternatives in terms of overall visual impacts on the view of the road by assigning 7 points to impacts rated as high, 5 to medium impacts, and 3 to low impacts, and then summing and averaging the ratings. Alternatives B would have slightly less visual impact than Alternative C2, which would have the greatest visual impact of all the alternatives.

Table 3.14-6 summarizes the visual impacts of Alternative B on the view of the road in terms of the landscape units from which each alternative would be visible. The visual impact ratings in these tables have been generalized from the key views to the entire landscape units based on the degree to which affected visual resources and viewing conditions within the units are similar to those represented in the key views.

### **Visual Experience (View From the Road)**

The relative quality of the visual experience afforded by the project build alternatives is an important consideration in project design. One of the project objectives is to “support local and regional comprehensive planning and development,” and consistency with those efforts requires visual quality within the proposed project. For example, the Community Image Background Report included in the SeaTac Comprehensive Plan (City of SeaTac 1994 with 1999 updates) includes recommended actions to “work with Washington State Department of Transportation to preserve and enhance greenbelts within the highway right-of-way” (Action 2B, page A6-10) and to “upgrade visual qualities” and “include visual enhancement in all road improvement projects, such as the SR 509 extension” (Action 3B, page A6-12).

<b>Table 3.14-4</b> <b>Viewer Response—Key Views</b>			
<b>Key View</b>	<b>Alternative B</b>	<b>Alternative C2</b>	<b>Alternative C3</b>
1 (South 192nd Street at Prince of Peace Church)	High	High	High
2 (South 200th Street at Hillgrove Cemetery)	Moderate	Moderate	Moderate
3 (South 200th Street and 26th Avenue South)	Moderate	Moderate	Moderate
4 (Des Moines Creek Trail)	High	None	None
5 (South 211th Street and 32nd Avenue South)	High	None	None
6 (South 182nd Street and International Blvd. South)	Moderate	Moderate	Moderate
7 (South 200th Street and 14th Avenue South)	Moderate	None	None
8 (South 200th Street at Des Moines Creek Trailhead)	None	High	High
9 (South 212th Street and 31st Avenue South)	None	High	High
10 (Kent-Des Moines Road to South 216th Street)	High	High	High
11 (South 216th Street to South 228th Street)	High	High	High
12 (South 260th Street to South 252nd Street)	Moderate	Moderate	Moderate
13 (South 310th Street to South 298th Street)	Low	Low	Low

<b>Table 3.14-5</b> <b>Visual Impact Rating and Ranking—Key Views</b>						
<b>Key View</b>	<b>Alternative B</b>		<b>Alternative C2</b>		<b>Alternative C3</b>	
1 (South 192nd Street at Prince of Peace Church)	Moderate	5	Moderate	5	Moderate	5
2 (South 200th Street at Hillgrove Cemetery)	Moderate	5	Moderate	5	Moderate	5
3 (South 200th Street and 26th Avenue South)	Moderate	5	Moderate	5	Low	3
4 (Des Moines Creek Trail)	High	7	None	0	None	0
5 (South 211th Street and 32nd Avenue South)	High	7	None	0	None	0
6 (South 182nd Street and International Blvd. South)	Low	3	Low	3	Low	3
7 (South 200th Street and 14th Avenue South)	Moderate	5	None	0	None	0
8 (South 200th Street at Des Moines Creek Trailhead)	None	0	High	7	Moderate	5
9 (South 212th Street and 31st Avenue South)	None	0	High	7	Moderate	5
10 (Kent-Des Moines Road to South 216th Street)	High	7	High	7	High	7
11 (South 216th Street to South 228th Street)	High	7	High	7	High	7
12 (South 260th Street to South 252nd Street)	Moderate	5	Moderate	5	Moderate	5
13 (South 310th Street to South 298th Street)	Moderate	5	Moderate	5	Moderate	5
Average		<u>5.54</u>		<u>5.60</u>		<u>5.00</u>
Ranking		2		1		3

<b>Table 3.14-6</b> <b>Visual Impacts, Alternative B: View of the Road</b>			
<b>Landscape Unit</b>	<b>Representative View(s)</b>	<b>Generalized Visual Impact Rating</b>	<b>Visual Impacts</b>
1	Manhattan Hill; Key View 1	Moderate	Foreground views of SR 509 (including 12th Place South interchange) with associated cut slopes and tree clearing, seen by low numbers of residential viewers with high viewer sensitivity
2	Maywood; Key View 7	Moderate	Foreground views of widened South 200th Street at 14th Avenue South and SR 509 and associated cut slopes and tree clearing behind houses along 15th Avenue South, seen by moderate numbers of residential viewers with high viewer sensitivity
5	Upper Des Moines Creek; Key View 2	Moderate	<p>Foreground views of widened South 200th Street at Des Moines Creek Park entry and trailhead parking lot, seen by moderate numbers of recreational users with high viewer sensitivity</p> <p>City of SeaTac proposes future extension of Des Moines Creek Trail to the north, across South 200th Street</p>
6	Lower Des Moines Creek; Key View 4A	High	Foreground and overhead views of bridge structures for SR 509 and ramps, with associated grading, removal of trees, shading, and interruption of visual continuity of scenic narrow stream valley, seen by moderate numbers of recreational users with high viewer sensitivity
8	SeaTac Center; Key View 6	Low	Foreground views of widened South Access Road, with associated steeper slope, loss of existing trees and landscaping, and new overpass, seen by high numbers of visitors and employees with moderate viewer sensitivity; views of project may be partially obstructed by first phase of the Sound Transit Central Light Rail Transit project
9	West Angle Lake; Key View 3	Moderate	<p>Foreground views of South Access Road with associated cut slopes, retaining walls and tree clearing, as well as widened South 200th Street with associated tree clearing in valley bottom and Des Moines Creek Park entry, seen by moderate numbers of visitors and employees with moderate viewer sensitivity</p> <p>Foreground views of noise walls along SR 509 and ramps between SR 99 and I-5, seen by moderate numbers of residential viewers with high viewer sensitivity in multifamily housing</p>

<p align="center"><b>Table 3.14-6</b>  <b>Visual Impacts, Alternative B: View of the Road</b></p>			
<b>Landscape Unit</b>	<b>Representative View(s)</b>	<b>Generalized Visual Impact Rating</b>	<b>Visual Impacts</b>
10	South 208th Street Draw; Key View 5	High	<p>Foreground views of noise walls along SR 509 and South Access Road west of SR 99, seen by high numbers of residential viewers with high viewer sensitivity in mobile home park (although much of the remaining mobile home park may be removed by the 28th/24th Avenue South project and/or the Port of Seattle Noise Remedy Program).</p> <p>Foreground views of tree clearing and noise walls along SR 509 and ramps between SR 99 and I-5, seen by moderate numbers of residential viewers with high viewer sensitivity in single-family housing</p>
11	Mansion Hill; Key View 5 east side	High	<p>Foreground views of tree clearing and noise walls along collector/distributor lanes on both sides of I-5, seen by moderate numbers of residential viewers with high viewer sensitivity in single-family housing</p>
12	Midway Ridge; Key View 5 (similar, east side)	High	<p>Foreground views of tree clearing and noise walls along collector/distributor lanes on both sides of I-5, seen by moderate numbers of residential viewers with high viewer sensitivity in single-family and multifamily housing</p>
13	Des Moines Creek Terrace; no key view	Low	<p>Foreground views of access roadways at intersection with 28th/24th Avenue South, seen by low numbers of residential viewers with high viewer sensitivity but very limited viewer exposure</p>
15	Kent/Federal Way Key Views 10, 11, 12, and 13	High	<p>Foreground views of tree clearing and noise walls along collector/distributor lanes on both sides of I-5, seen by moderate numbers of residential viewers with high viewer sensitivity in single-family and multifamily housing</p>

Alternative B would provide the most potential distant views (six) of all build alternatives. The highest quality of these views would encompass the Olympic Mountains and the Puget Sound. Other views would include Sea-Tac Airport and Des Moines Creek Park. Overall, the views provided by Alternative B from the roadway would be the most attractive of all the alternatives.

## ***Alternative C2 (Preliminary Preferred)***

### **Visual Resource and Quality Change**

Table 3.14-7 summarizes the visual resource change that would be caused by the proposed project in the key views from which Alternative C2 would be visible. Of the ten key views affected by Alternative C2, two views would experience a low level of change, four a moderate level, and four a high level. The two key views with a high level of change are Key View 2 (South 200th Street near 18th Avenue South), Key View 8 (South 200th Street at Des Moines Creek Trailhead), Key View 10 (Kent-Des Moines Road to South 216th Street), and Key View 11 (South 216th Street to South 228th Street).

### **Viewer Response**

Table 3.14-4 indicates the likely degree of viewer response to adverse visual impacts on a scale ranging from high to low, based on viewer sensitivity and exposure. Under Alternative C2, viewers would have a high response to changes at three of its Key Views 1, 8, 9, 10, and 11.

### **Visual Impacts (View of the Road)**

Table 3.14-5 shows that Alternative C2 would have a high level of impact on Key Views 8, 9, 10, and 11; a moderate level on Key Views 1, 2, 3, 12, and 13; and a low level on Key View 6. Overall, Alternative C2 would have the highest level of impact resulting from views of the road.

The visual impacts by landscape unit for Alternative C2 are presented in Table 3.14-8.

### **Visual Experience (View From the Road)**

Alternative C2 would provide three potential distant views. For the most part these views would be confined and would not be very scenic. Tree-covered hillsides would provide the most visual interest for these views. Overall, the views provided by Alternative C2 from the roadway would be the least attractive of all the alternatives.



Table 3.14-7 Visual Resource and Level of Quality Change, Alternative C2 (Preliminary Preferred)						
Key View/Level of Quality Change	Modification of Landform	Removal of Vegetation	Introduction of Manmade Structures	View Obstruction	Light and Glare	Shading
1/Low (South 192nd Street at Prince of Peace Church parking lot)	Same as Alternative B	Same as Alternative B	Same as Alternative B	Same as Alternative B	Same as Alternative B	Same as Alternative B
2/High (South 200th Street near 18th Avenue South)	SR 509 and South Access Road: midground fill in valley bottom  South 200th Street: widen to three to five lanes (varies); widen existing cut on north (left) side at 18th for northbound entrance to SR 509 and southbound exit	SR 509 and South Access Road: removal of midground trees in valley bottom on both sides of South 200th Street  South 200th Street: removal of foreground trees for roadway widening and to widen 18th for northbound entrance to SR 509 and southbound exit	SR 509 and South Access Road: viaduct structure in midground for SR 509 across northeast corner of Des Moines Creek Park and park entry, with flyover above for southbound South Access Road  South 200th Street: widen to 3 to 5 lanes (varies), and luminaires; widen 18th to provide northbound entrance to SR 509 and southbound exit	South Access Road: no scenic elements obstructed (project features all below midground skyline)  South 200th Street: same	SR 509 and South Access Road: possible glare from luminaires at intersection with South 200th Street	Some shading of northeast corner of Des Moines Creek Park, park entry, trailhead, and portion of creek is likely
3/Moderate (South 200th Street and 26th Avenue South)	SR 509 and South Access Road: foreground fill in valley bottom, midground cut on east side of Des Moines Creek valley	SR 509 and South Access Road: removal of foreground trees in valley on both sides of South 200th Street	SR 509 and South Access Road: viaduct structure in valley bottom for SR 509 across northeast corner of Des Moines Creek Park and park entry, with flyover above for	SR 509 and South Access Road: no scenic elements obstructed (project features all below South 200th Street)	SR 509 and South Access Road: possible glare from luminaires at SR 509 intersection with South 200th Street	Some shading of northeast corner of Des Moines Creek Park, park entry, trailhead, and portion of creek is likely

Table 3.14-7 Visual Resource and Level of Quality Change, Alternative C2 (Preliminary Preferred)							
Key View/Level of Quality Change	Modification of Landform	Removal of Vegetation	Introduction of Manmade Structures	View Obstruction	Light and Glare	Shading	
	South 200th Street: widen to three to five lanes (varies)	South 200th Street: removal of midground trees along South 200th for roadway widening	southbound South Access Road mainline and overpass for northbound South Access Road mainline  South 200th Street: widening to 3 to 5 lanes (varies) and luminaires; widen 18th to provide northbound entrance to SR 509 and southbound exit				
<b>6/Low</b> (18200 International Boulevard South)	Same as Alternative B	Same as Alternative B	Same as Alternative B	Same as Alternative B	Same as Alternative B	Same as Alternative B	
<b>8/High</b> (South 200th Street at Des Moines Creek Trailhead)	SR 509: midground fill beyond South 200th Street	SR 509 and South 200th Street: removal of foreground trees on left side of trail and along South 200th Street to right (small number associated with widening)	SR 509 and South Access Road: South Access Road to right in foreground and middle ground; SR 509 bridge crosses over Des Moines Creek and Trail behind and left of viewer	South Access Road: Possible exposure to unattractive views to right	SR 509 and South Access Road: possible glare from luminaires along 509 and South 200th Street/South Access Road interchange	Limited shading of northeast corner of Des Moines Creek Park, and portion of creek is possible (minimized by height of bridge)	
<b>9/Moderate</b> (South 212th Street and 31st Avenue South)	SR 509: cut for ramps to I-5	Removal of mature midground trees (residential plantings and I-5 roadside buffer)	Possible removal of midground house and other neighboring homes; exposure of I-5, southbound 509 ramp to I-5; or noise walls	Exposure to unattractive views of I-5	Possible headlight glare from I-5 and SR 509 traffic  No roadway lighting likely	No shading of scenic resources or sensitive viewing areas is likely	

Table 3.14-7 Visual Resource and Level of Quality Change, Alternative C2 (Preliminary Preferred)						
Key View/Level of Quality Change	Modification of Landform	Removal of Vegetation	Introduction of Manmade Structures	View Obstruction	Light and Glare	Shading
10/High (Kent-Des Moines Road to South 216th Street)	Same as Alternative B	Same as Alternative B	Same as Alternative B	Same as Alternative B	Same as Alternative B	Same as Alternative B
11/High (South 216th Street to South 228th Street)	Same as Alternative B	Same as Alternative B	Same as Alternative B	Same as Alternative B	Same as Alternative B	Same as Alternative B
12/Moderate (South 260th Street to South 252nd Street)	Same as Alternative B	Same as Alternative B	Same as Alternative B	Same as Alternative B	Same as Alternative B	Same as Alternative B
13/Moderate (South 310th Street to South 298th Street)	Same as Alternative B	Same as Alternative B	Same as Alternative B	Same as Alternative B	Same as Alternative B	Same as Alternative B

<b>Table 3.14-8</b> <b>Visual Impacts, Alternative C2 (Preliminary Preferred): View of the Road</b>			
<b>Landscape Unit</b>	<b>Representative View(s)</b>	<b>Generalized Visual Impact Rating</b>	<b>Visual Impacts</b>
1	Manhattan Hill; Key View 1	Moderate	Similar to Alternative B but includes a bridge over a wetland
5	Upper Des Moines Creek; Key Views 2 and 8	High	<p>Foreground views of SR 509 bridge and foreground and middle ground views of South Access Road seen by moderate numbers of recreational users with high viewer sensitivity</p> <p>City of SeaTac proposes future extension of Des Moines Creek Trail to the north, across South 200th Street</p>
8	SeaTac Center; Key View 6	Low	Same as Alternative B
9	West Angle Lake; Key View 3	Moderate	<p>Foreground views of South Access Road with associated cut slopes, retaining walls, tree clearing, and flyover ramp, as well as widened South 200th Street with associated tree clearing in valley bottom and Des Moines Creek Park entry, seen by moderate numbers of visitors and employees with moderate viewer sensitivity</p> <p>Foreground views of noise walls along SR 509 and ramps between SR 99 and I-5, seen by moderate numbers of residential viewers with high viewer sensitivity in multifamily housing</p>
10	South 208th Street Draw; Key View 5 (similar)	High	Foreground views of tree clearing and noise walls along SR 509 and ramps between SR 99 and I-5, seen by moderate numbers of residential viewers with high viewer sensitivity in single-family housing (much or all of the mobile home park would be removed by Port of Seattle Noise Remedy Program and/or by the 28th/24th Avenue South project)
11	Mansion Hill; Key View 9 east side	High	Same as Alternative B
12	Midway Ridge; Key View 9 (similar, east side)	High	Same as Alternative B
15	Kent/Federal Way; Key Views 10, 11, 12, and 13	High	Same as Alternative B

## **Alternative C3**

### **Visual Resource and Quality Change**

Table 3.14-9 summarizes the visual resource change that would be caused by the proposed project in the key views from which Alternative C3 would be visible. Of the ten key views affected by Alternative C3, one view would experience a low level of change, six a moderate level, and three a high level. The key views with a high level of change are Key View 8 (South 200th Street at Des Moines Creek Trailhead), Key View 10 (Kent-Des Moines Road to South 216th Street), and Key View 11 (South 216th Street to South 228th Street).

### **Viewer Response**

Table 3.14-4 indicates the likely degree of viewer response to adverse visual impacts on a scale ranging from high to low, based on viewer sensitivity and exposure. Viewers under Alternative C3 would have a high response to changes to the same key views as Alternative C2: Key Views 1, 8, 9, 10, and 11.

### **Visual Impacts (View of the Road)**

Table 3.14-5 shows that the SR 509 extension under Alternative C3 would not have a high level of impact on any key views; however, the I-5 improvements would have a high level of impact on Key Views 10 and 11. Alternative C3 would have a moderate level on Key Views 1, 2, 8, 9, 12, and 13, and a low level on Key Views 3 and 6. Overall, Alternative C3 would result in the least level of impact from views of the road for all build alternatives.

The visual impacts by landscape unit for Alternative C3 are presented in Table 3.14-10.

### **Visual Experience (View From the Road)**

Alternative C3 would provide three potential distant views. Like Alternative C2, these views would mostly be confined and not very scenic. Tree-covered hillsides and Sea-Tac Airport would provide the visual interest for these views. Overall, the views provided by Alternative C3 from the roadway would be less attractive than Alternative B and more attractive than Alternative C2.

Table 3.14-9 Visual Resource and Level of Quality Change, Alternative C3						
Key View/Level of Quality Change	Modification of Landform	Removal of Vegetation	Introduction of Manmade Structures	View Obstruction	Light and Glare	Shading
<b>1/Low</b> (South 192nd Street at Prince of Peace Church parking lot)	Same as Alternative B	Same as Alternative B	Same as Alternative B	Same as Alternative B	Same as Alternative B	Same as Alternative B
<b>2/Moderate</b> (South 200th Street near 18th Avenue South)	SR 509 and South Access Road: midground fill in valley bottom  South 200th Street: widen to three to five lanes (varies); widen existing cut on north (left) side at 18th for northbound entrance to SR 509 and southbound exit	SR 509 and South Access Road: removal of midground trees in valley bottom on both sides of South 200th Street  South 200th Street: removal of foreground trees for roadway widening and to widen 18th for northbound entrance to SR 509 and southbound exit	SR 509 and South Access Road: viaduct structure in midground for SR 509 across northeast corner of Des Moines Creek Park and park entry; overpass beyond for South Access Road mainline  South 200th Street: widen to 3 to 5 lanes (varies), and luminaires; widen 18th to provide northbound entrance to SR 509 and southbound exit	South Access Road: no scenic elements obstructed (project features all below midground skyline)  South 200th Street: same	SR 509 and South Access Road: possible glare from luminaires at intersection with South 200th Street	Some shading of northeast corner of Des Moines Creek Park, park entry, trailhead, and portion of creek is likely
<b>3/Moderate</b> (South 200th Street and 26th Avenue South)	SR 509 and South Access Road: foreground fill in valley bottom, midground cut on east side of Des Moines Creek valley	SR 509 and South Access Road: removal of foreground trees in valley on both sides of South 200th Street  South 200th Street: removal of midground	SR 509 and South Access Road: foreground overpass for South Access Road mainlines, viaduct structure in valley bottom for	SR 509 and South Access Road: no scenic elements obstructed (project features all below South 200th Street)	SR 509 and South Access Road: possible glare from luminaires at 509 intersection with South 200th Street	Some shading of northeast corner of Des Moines Creek Park, park entry, trailhead, and portion of creek

Table 3.14-9 Visual Resource and Level of Quality Change, Alternative C3						
Key View/Level of Quality Change	Modification of Landform	Removal of Vegetation	Introduction of Manmade Structures	View Obstruction	Light and Glare	Shading
	South 200th Street: widen to three to five lanes (varies)	trees along South 200th for roadway widening	SR 509 across northeast corner of Des Moines Creek Park and park entry  South 200th Street: widening to three to five lanes (varies) and luminaires; widen 18th to provide northbound entrance to SR 509 and southbound exit			
<b>6/Moderate</b> (18200 International Boulevard South)	Same as Alternative B	Same as Alternative B	Same as Alternative B	Same as Alternative B	Same as Alternative B	Same as Alternative B
<b>8/High</b> (South 200th Street at Des Moines Creek Trailhead)	SR 509: midground fill beyond South 200th Street	SR 509 and South Access Road: removal of foreground trees on right side of the trailhead and along South 200th	SR 509 and South Access Road: SR 509 mainline parallel to trail in immediate foreground; viaduct structure for SR 509 diagonally across Des Moines Creek, trail, and park entry	SR 509 and South Access Road: view north across South 200th to golf course obstructed by viaduct (golf course could be closed or reduced in size by other future actions)	SR 509 and South Access Road: roadway lighting along SR 509 viaduct is unlikely	Some shading of northeast corner of Des Moines Creek Park, park entry, trailhead, and portion of creek is likely
<b>9/Moderate</b> (South 212th Street and 31st Avenue South)	SR 509: cut for ramps to I-5	Removal of mature midground trees (residential plantings and I-5 roadside buffer)	Removal of midground house and (possibly) foreground homes; exposure of I-5, southbound SR 509 ramp to I-5; or noise walls	Exposure to unattractive views of I-5	Possible headlight glare from I-5 and SR 509 traffic  No roadway lighting likely	No shading of scenic resources or sensitive viewing areas is likely

Table 3.14-9 Visual Resource and Level of Quality Change, Alternative C3						
Key View/Level of Quality Change	Modification of Landform	Removal of Vegetation	Introduction of Manmade Structures	View Obstruction	Light and Glare	Shading
<b>10/High</b> (Kent-Des Moines Road to South 216th Street)	Same as Alternative B	Same as Alternative B	Same as Alternative B	Same as Alternative B	Same as Alternative B	Same as Alternative B
<b>11/High</b> (South 216th Street to South 228th Street)	Same as Alternative B	Same as Alternative B	Same as Alternative B	Same as Alternative B	Same as Alternative B	Same as Alternative B
<b>12/Moderate</b> (South 260th Street to South 252nd Street)	Same as Alternative B	Same as Alternative B	Same as Alternative B	Same as Alternative B	Same as Alternative B	Same as Alternative B
<b>13/Moderate</b> (South 310th Street to South 298th Street)	Same as Alternative B	Same as Alternative B	Same as Alternative B	Same as Alternative B	Same as Alternative B	Same as Alternative B



**Table 3.14-10  
Visual Impacts, Alternative C3: View of the Road**

<b>Landscape Unit</b>	<b>Representative View(s)</b>	<b>Generalized Visual Impact Rating</b>	<b>Visual Impacts</b>
1	Manhattan Hill; Key View 1	Moderate	Same as Alternative B
5	Upper Des Moines Creek; Key Views 2 and 8	Moderate – High	<p>Foreground views of SR 509 viaduct at entrance to Des Moines Creek Park and trail to south, seen by moderate numbers of recreational users with high viewer sensitivity</p> <p>City of SeaTac proposes future extension of Des Moines Creek Trail to the north, across South 200th Street</p>
8	SeaTac Center; Key View 6	Low	Same as Alternative B
9	West Angle Lake; Key View 3	Moderate	<p>Foreground views of South Access Road with associated cut slopes, retaining walls, tree clearing, and flyover ramp, as well as widened South 200th Street with associated tree clearing in valley bottom and Des Moines Creek Park entry, seen by moderate numbers of visitors and employees with moderate viewer sensitivity</p> <p>Foreground views of noise walls along SR 509 and ramps between SR 99 and I-5, seen by moderate numbers of residential viewers with high viewer sensitivity in multifamily housing</p>
10	South 208th Street Draw; Key View 5 (similar)	High	Foreground views of tree clearing and noise walls along SR 509 and ramps between SR 99 and I-5, seen by moderate numbers of residential viewers with high viewer sensitivity in single-family housing (much or all of the mobile home park would be removed by Port of Seattle Noise Remedy Program and/or by the 28th/24th Avenue South project)
11	Mansion Hill; Key View 5 east side	High	Same as Alternative B
12	Midway Ridge; Key View 5 (similar, east side)	High	Same as Alternative B
13	Des Moines Creek Terrace (no key view)	Low	Foreground views of project with associated cut slopes, retaining walls, tree clearing, and flyover ramp; seen by low numbers of visitors with low viewer sensitivity inside Noise Remedy Program area (residences cleared by Port of Seattle)
15	Kent/Federal Way; Key Views 10-16	High	Same as Alternative B

### 3.14.4 Mitigation Measures

A variety of mitigation measures could be employed to partially or fully mitigate the potential adverse visual impacts identified for the build alternatives, including the following:

- Use an interdisciplinary design team to incorporate aesthetic considerations in project design subsequent to the environmental review process.
- Minimize clearing for construction and preserving existing stands of mature trees and other attractive natural vegetation as practical.
- Plant appropriate vegetation within the project right-of-way to preserve the semiurban character of existing views; to screen views of the roadway, elevated structures, retaining walls, noise walls and other project features from areas with high viewer sensitivity; and to blend the project appearance with adjoining natural landscapes to the maximum feasible extent.
- Consider using long-span bridge crossings at trails, streams, and wetlands to minimize view obstruction and interruption of visual continuity.
- Employ the principles of architectural design to enhance the appearance of project features such as retaining walls and noise walls, including stepping and battering walls to reduce apparent height and scale; using the design vocabulary employed in the Sea-Tac Airport's North Access Road for the structures associated with the South Access Road; using surface texture on concrete surfaces to reduce apparent scale; and using concrete sealants to provide uniform color and help limit graffiti damage.
- Replace existing street trees and other trees (outside the minimum clear zone) to provide screening for sensitive visual resources and viewers (the minimum clear zone is defined in the *WSDOT Design Manual* [2000]).
- Investigate opportunities to acquire sufficient right-of-way to provide space for plantings near retaining and noise walls that adjoin areas with high viewer sensitivity. Retain remainder parcels that contain attractive natural vegetation that could contribute to the quality of view toward the proposed project or that could screen views from sensitive viewers.
- Design interchange intersections in conjunction with local jurisdictions and with care not to increase waterfowl attractance.

The level of mitigation measures are related to the level of visual impact indicated in the matrices for each landscape unit.

### **3.14.5 Construction Activity Impacts and Mitigation**

#### ***Construction Activity Impacts***

Temporary visual impacts during construction would include the presence of construction equipment, materials, signage, disturbed areas, and staging areas in the construction zone that would reduce the visual quality of the immediate area. In addition, temporary lighting may be necessary for nighttime construction of certain project elements or at certain locations. Examples may include nighttime construction along existing road or highway rights-of-way to minimize disruption of daytime traffic. This temporary lighting could impose impacts on residential areas by exposing residents to uncomfortable glare from unshielded light sources or by increasing ambient nighttime light levels.

#### ***Mitigation Measures***

During construction, visual impacts could be reduced by locating material and equipment storage in areas that are not prominent. Light impacts could be minimized by shielding roadway lighting so that light sources (such as bulbs) are not directly visible from residential areas and local streets and to limit spillover ambient light in residential areas.

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